

REMARKS

Claims 21-40 are pending in the above-identified application. Claim 21 is independent.

We amended independent claim 21 to clarify that the different layers are in contact with but not secured to each other while being able to move relative to each other.

The examiner objected to claim 39 on the ground that "colour" should be changed to "color." In the interest of expediting prosecution, we have amended claim 39 accordingly.

The examiner rejected claims 21-23, 25-26, 29-31 and 37-40 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,220,634 to Burrowes. The examiner also rejected claims 21, 32 and 34-36 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,743,569 to Deters et al. Further, the examiner rejected claims 21 and 27-28 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,717,182 to Behrens et al. The examiner rejected claim 24 under 35 U.S.C. §103(a) as being unpatentable in view of Burrowes, and rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable in view of Deters.

Amended independent claim 21 recites a pipe fitting having an innermost layer and an outer layer where "the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other." As explained in the application:

It is also easy to make the impact resistance of the pipe fitting extremely good. When the different layers are not attached to each other, the pipe fitting is very resistant to shear stress. This is because the surfaces that are moving/separate relative to each other transfer forces more flexibly and more advantageously. The different layers of the pipe fitting can be formed at different times, because it is not desirable that the different layers become attached to each other. Hence, forming the production process of the pipe fitting is reasonably simple. Further, the material of the innermost layer can be selected to be rather hard, whereby the outer layer is not easily attached to the hard material. The material of the inner layer is preferably very hard in order for it to bore into the softer inner wall of the pipe to be fitted upon implementation of the fitting, and to form a tight fitting. Forming a stop member of the end of the outer layer makes the connecting of the pipe to the pipe fitting easy, and thus, a tight and reliable fitting is ensured. In addition, since the end of the outer layer functions as the stop member, no other stop member is required that would make it difficult to keep the system clean, for instance. (paragraph 0008)

Since the layers are not secured to each other, the production process of the pipe fitting is simplified, and the pipe fitting can more efficiently cope with multiple design requirements (e.g., be resistant to chemical erosion, have adequate heat tolerance, etc.).

In contrast, none of the references cited by the examiner discloses a pipe fitting having an innermost and outer layer where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other.”

Burrowes

Burrowes describes a branched hose construction that includes an insert 11 having at least three legs, and made of a rigid material (FIG. 2, and col. 2, lines 41-52). Hoses 20 are placed inside the insert 11. Burrowes explains that:

A saddle 30 is molded around the junction of the hoses and the insert 11. The rubber composition which is used as the molded saddle 30 is comprised of (a) an EPDM alloy comprised of (i) functionalized EPDM rubber, (ii) an EPDM rubber having nylon side chains grafted thereto and (iii) dispersed nylon, (b) an EPDM rubber and (c) fibrillated aramid fibers. (emphasis added, col. 3, lines 12-18)

As indicated by Burrowes, the saddle 30 (the alleged outer layer) is molded onto the junction of the hoses and the insert 11. While there is no description of cross-linking or fusing between the saddle 30 and the insert 11, we submit that the saddle 30 “secured” to the insert 11 by way of the molding. In contrast, amended claim 21 recites that “the outer layer is in contact with but not secured to the innermost layer.”

Moreover, the saddle 30 is shown to secure the hoses 20 against the insert 11 where the saddle 30 “surrounds the annular end surface of each hose 20” (FIG. 2, and col. 3, lines 6-8). We submit that if the saddle 30 is designed to surround the end of each hose 20 to secure it against the insert 11, then the saddle 30 and the insert 11 are secured to each other. Otherwise, the saddle 30 would fail in its function to secure the hoses 20, i.e., the hoses 20 would not receive a proper connection and would become loose.

For at least these reasons, we submit that Burrowes does not teach a pipe fitting having an innermost and outer layers where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other,” as recited in amended claim 21.

Deters

Deters describes “devices used in connecting and joining a flexible hose, to another hose or a fitting particularly permanent attachment [sic] of one or more hoses” (col. 1, lines 6-10). FIG. 1 shows a typical hose connection design that for the most part is used with Deters’ hose connection design. Particularly, as described by Deters in relation to FIG. 1:

The connection comprises a rigid inner connector 15 having a plurality of tubular ends 16, which preferably include ribs or annular barbs 17, onto which the ends of the hoses 10, 12 and 14 are fitted, and a rigid outer connector 18 molded in place about the inner connector 15 and assembled hose ends. Assuming, for example, that hose 12 fails, in the past the entire set of three hoses and connector must be replaced. (emphasis added, col. 2, lines 24-31)

The rigid outer connector 18 is molded in place about the rigid inner connector 15. Therefore, we submit that the connector 18 is “secured” to the inner connector 15. Otherwise, the outer connector 18 would fail in its function to permanently attach the hoses 10, 12, 14, to the inner connector 15, i.e., the hoses would not receive a proper connection and would become loose. In contrast, amended claim 21 recites that “the outer layer is in contact with but not secured to the innermost layer.”

Deter teaches frangible sections that are radially extending slots 22 that enable fracturing of the outer connector if it becomes necessary to remove one of the hoses (col. 2, lines 32-58). However, we submit that the frangible feature of Deter cannot be properly read on the “not secured” limitation of amended claim 21. To do so would construe the claim term outside of the ordinary scope of its meaning. Indeed, we submit that the frangible feature of Deter works *because* the outer connector 18 is “secured” to the inner connector 15 so as to provide the proper support to allow the rigid outer connector 18 to be fractured.

For at least these reasons, we submit that Deters does not teach a pipe fitting having an innermost and outer layers where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other,” as recited in amended claim 21.

Behrens

Behrens describes a coupling sleeve for pipes (Abstract). The examiner referred to the layer 13 of Behrens' coupling sleeve as corresponding to the outer layer recited in claim 21. The examiner then referred to the carrier body portion 7 as the innermost layer recited in claim 21. In the office action, the examiner noted that “portion 13 is attached to sides 11 which is attached to 7” (page 8). Since layer 13 does not at all come in contact with the carrier body portion 7, we submit that Behrens does not teach a pipe fitting having an innermost and outer layers where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other,” as recited in amended claim 21.

Claims 22-40 depend from independent claim 21, and are therefore patentable for at least the same reasons as applicant's independent claim 21.

It is believed that all the rejections and/or objections raised by the examiner have been addressed.

In view of the foregoing remarks, we respectfully submit that the application is in condition for allowance and such action is respectfully requested at the examiner's earliest convenience.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made

Applicant : Jarmo Smahl
Serial No. : 10/501,802
Filed : February 9, 2005
Page : 10 of 10

Attorney's Docket No.: 46401-014US1 / 2011810US

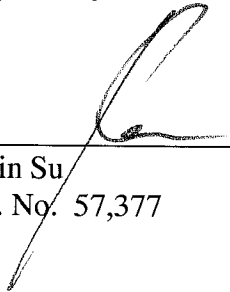
arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

The extension fee in the amount of \$120 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other required fees to deposit account 50-4189, referencing attorney docket number 46401-014US1.

Respectfully submitted,

Date: _____

6-15-07



Kevin Su
Reg. No. 57,377

Customer Number 69713
Occhiuti Rohlicek & Tsao LLP
10 Fawcett Street
Cambridge, MA 02138
Telephone: (617) 500-2508
Facsimile: (617) 500-2499